TCT-250

3-year Clinical Outcomes of Durable-Polymer Zotarolimus-Eluting and Biodegradable-Polymer Biolimus-Eluting Coronary Stents in Patients with Diabetes Mellitus (a SORT OUT VI Substudy)

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BACKGROUND Diabetes is associated with an increased risk of major adverse cardiac events after percutaneous coronary intervention. Data indicate that a durable-polymer stent can be as safe and efficacious as a biodegradable-polymer stent in an all-comer population. Long-term data comparing safety and efficacy of these stent types in patients with diabetes is lacking. We compared 3-year clinical outcomes in patients with diabetes treated with the durable-polymer zotarolimus-eluting Resolute Integrity stent (ZES, Medtronic CardioVascular Inc., Santa Rosa, California) or the biodegradable-polymer biolimus-eluting BioMatrix Flex stent (BES, Biosensors Interventional Technologies Pte Ltd., Singapore).

METHODS A total of 2,999 patients were randomized to treatment with ZES (n = 1,502, n = 265 diabetics) or BES (n = 1,497, n = 270 diabetics) and followed for 3 years. Randomization was stratified by presence/absence of diabetes. The endpoint was major adverse cardiac events (MACE) defined as a composite of safety (cardiac death and myocardial infarction (MI) not clearly attributable to a non-target lesion) and efficacy (target lesion revascularization (TLR)) in patients with diabetes.

RESULTS At 3-year follow up, MACE occurred in 34 (12.6%) diabetic patients assigned to ZES and in 46 (17.4%) assigned to BES (RR 0.72, 95% CI 0.46-1.12, p=0.14). Cardiac death (4.8% vs. 5.7%, RR 0.85, 95% CI 0.41-1.79, p=0.68), MI not clearly attributable to a non-target lesion (4.8% vs. 9.1%, RR 0.52, 95% CI 0.26-1.02, p=0.057), and TLR (7.0% vs. 9.1%, RR 0.78, 95% CI 0.43-1.42, p=0.41) did not differ significantly between the ZES and BES group respectively. Definite stent thrombosis occurred in 1 (0.4%) diabetic patient assigned to ZES and in 4 (1.5%) assigned to BES (RR 0.24, 95% CI 0.03-2.19, p=0.21).

CONCLUSION At 3-year follow-up ZES and BES had similar clinical outcomes in patients with diabetes.

CATEGORIES CORONARY: Stents: Drug-Eluting

TCT-251

Abnormal glucose metabolism and adverse event rates 12 months after treatment with contemporary drug-eluting stents: Insights from the BIO-RESORT Silent Diabetes study

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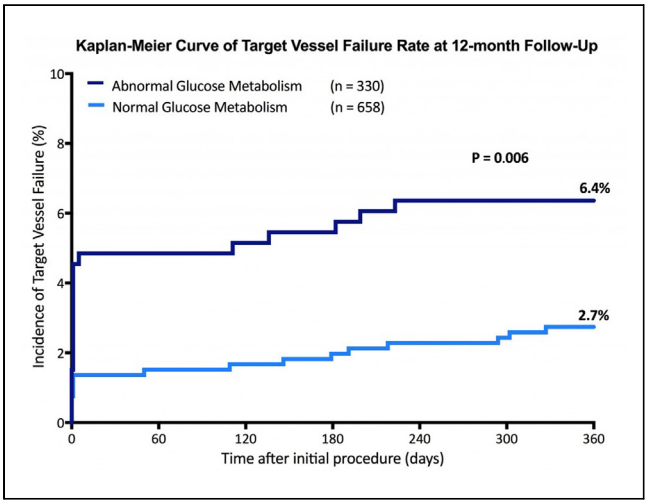
BACKGROUND Patients with abnormal glucose metabolism, including patients with undetected and thus untreated diabetes, may have higher event risks after percutaneous coronary intervention (PCI) with contemporary drug-eluting stents (DES). We assessed the prevalence and clinical impact of abnormal glucose metabolism in all-comer patients without previously known diabetes undergoing PCI.

METHODS The BIO-RESORT Silent Diabetes study, performed at Thoraxcentrum Twente, is a substudy of the randomized BIO-RESORT trial (NCT01674803). We performed an additional analysis identifying patients with an abnormal glucose metabolism by means of oral glucose tolerance testing (OGTT), and assessment of glycated hemoglobin A1c (HbA1c) with fasting plasma glucose (FPG) and clinical outcome at 12 months.

RESULTS Assessment of glucose metabolism revealed that of the 988 participants a total 330 (33.4%) patients had an abnormal metabolism, while 658 (66.6%) patients had a normal metabolism. Patients with abnormal glucose metabolism showed higher rates of the primary endpoint Target Vessel Failure (6.4% vs. 2.7%; p<0.01), a composite of cardiac death, target vessel-related myocardial infarction, or target vessel revascularization. Multivariate analysis demonstrated that an abnormal glucose metabolism independently predicted adverse event risk (HR 2.2, 95%-CI:1.2-4.2).



CONCLUSION Abnormal glucose metabolism was detected in one out of three PCI all-comer patients and independently associated with a more than 2-fold higher event risk. Future intervention studies should determine whether meaningful benefits may accrue from routine glycaemia testing in such patients.

CATEGORIES CORONARY: PCI Outcomes

TCT-252

Impact of diabetes on angina frequency and health status outcomes after bioresorbable scaffold implantation

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BACKGROUND Patient with diabetes mellitus (DM) were reported to have worse angina relief and life quality after angioplasty with metallic stents. Limited data are available on after angioplasty with implantation of bioresorbable scaffold (BRS) among diabetics.

METHODS This is a pooled analysis of BVS EXPAND and BVS STEMI Studies. Serial evaluation with the Seattle Angina Questionnaire (SAQ) and the EuroQol health status questionnaire (EQ-5D) was performed at 1, 6, 12, 18 and 24 months after BRS implantation. SAQ and EQ-5D Visual Analogue Scale (EQ VAS) scores (ranging 0 to 100, high scores indicate better health status) were reported in diabetic and non-diabetic subgroups.